Comments by Hempstead

Questions to address in the report:

Are the study objectives clearly stated and appropriate? (Yes, No, Unsure) Why?

Yes.

Is the overall study design appropriate for the study objectives? (Yes, No, Unsure) Why?

I don't believe so. First of all there is no theoretical model to really describe the mechanism through which PDMPs are supposed to impact overdose and/or MME. This theoretical description should not treat the PDMP as a monolith, but should discuss particular features of PDMPs that are intended to have certain effects. There seemed to be relatively little thought given to how PDMPs are supposed to work.

The presence or absence of these features in state PDMPs should be included in the empirical analysis. Additionally, much more thought should be given to other determinants of MME and overdose – practice style, age structure, morbidity, access to health care/supply of health care providers , supply and quality of street drugs – all of these things are important, but were really not at all developed in this study or included in the multivariate analysis.

Also, rather than combine all of the drugs into one MME – the authors might have developed and tested theories about individual opiates.

Are the methods and analysis plan appropriate for the study objectives? (Yes, No, Unsure) Why?

No I don't believe so. The analysis should have been a "difference in differences" approach, with the inclusion of years from PDMP states before the PDMP was developed. From the discussion in the paper it appeared that states were treated as PDMP states for the entire period, no matter when their PDMP went into place. If this was not the case it was pretty much impossible to tell that from the paper.

As mentioned above I think there should have been models for individual drugs, rather than just MME and opiate mortality.

I think the control variables used were inadequate. Also, there are practically no tables in the paper that show the results. The one table doesn't show any of the covariates other

than year and the dummy variables for D.C., which are of little interest. Frankly I think they could have just taken the D.C. data out of their analysis if it was unreliable. The authors state that MME was a RH side variable for the mortality regression, but that coefficient is not shown in the table, nor is the result for that coefficient described in the text.

The graphs are not appropriate and are very much over-used. One or two graphs would have been more than enough, but the paper lacks basic information that should be in tables. For example, there should have been a table that showed for each state with a PDMP, when it came into existance and what its features were.

I also think they could have considered or at least discussed the possibility of estimating this at the sub-state level. The ARCOS stuff is published at the three digit zip code level.

Were the data analyzed in such a way to address the objectives of the study appropriately? (Yes, No, Unsure) Why?

In my opinion, no. See above.

Are the study results presented and interpreted appropriately and completely? (Yes, No, Unsure) Why?

See above.

Are the study conclusions, policy implications, and recommendations appropriate and complete? (Yes, No, Unsure) Why?

See above.

Are there any other comments on the report?

I think this is a missed opportunity. The subject is extremely important and of great interest to many people.